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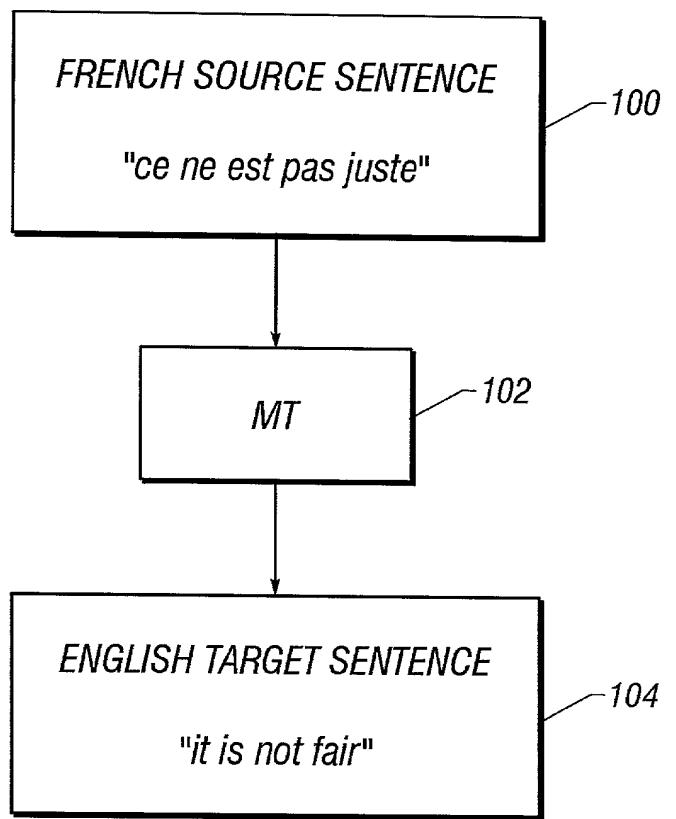


FIG. 1A

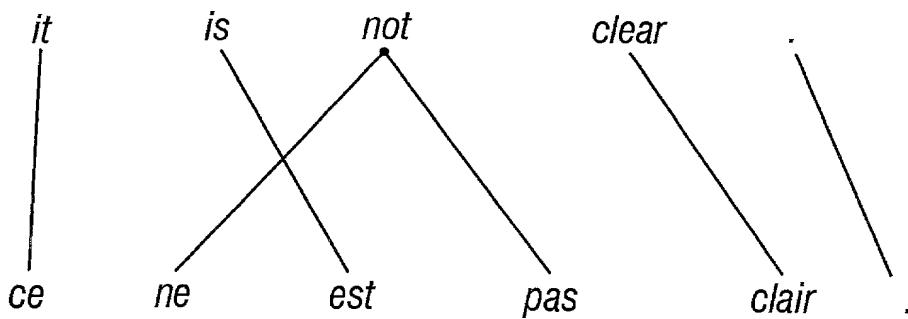


FIG. 1B

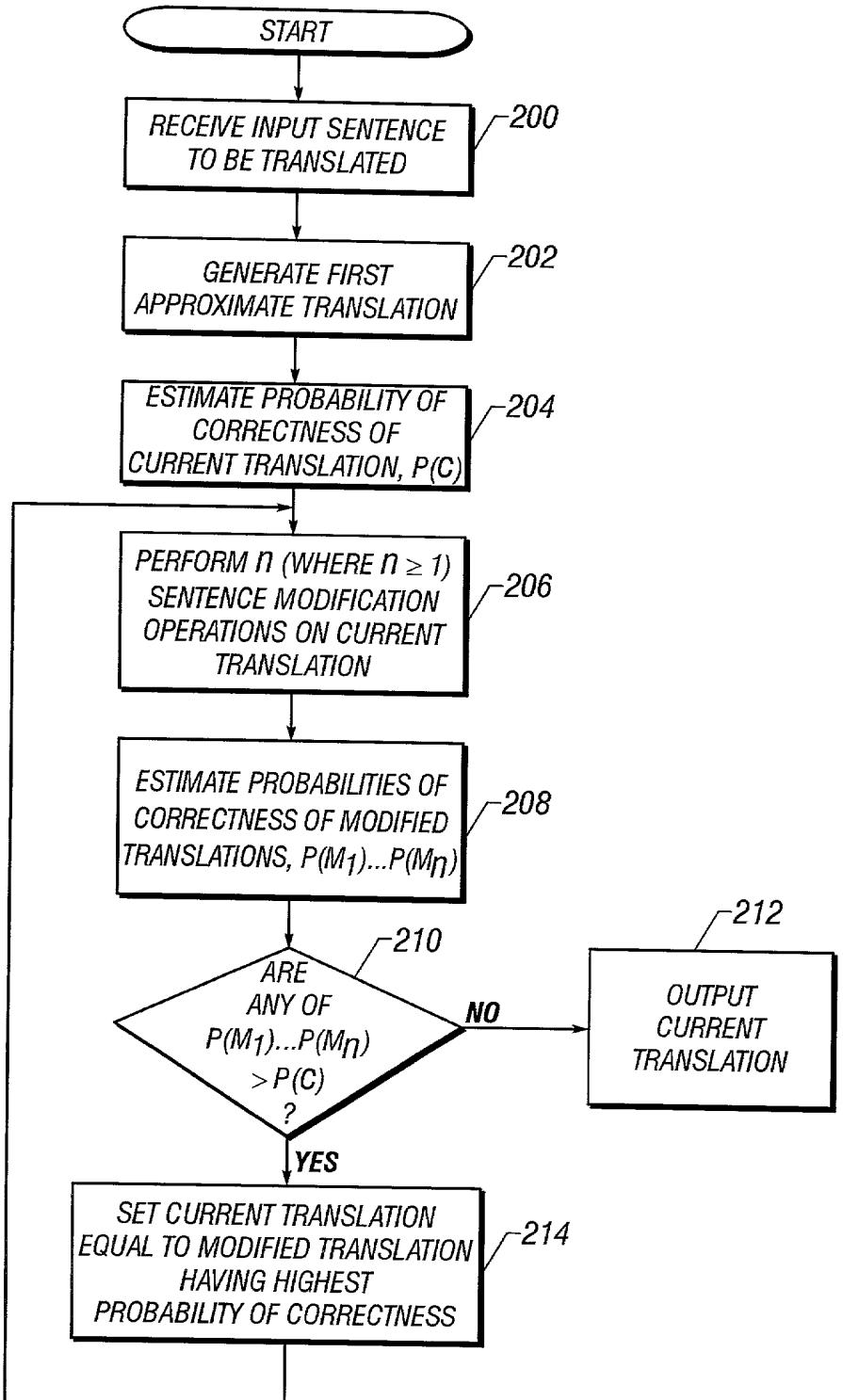


FIG. 2

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ACTION

NULL well heard , it talking a beautiful victory .
bien entendu , il parle de une belle victoire .

translateTwoWords
(5, talks, 7, great)

NULL well heard , it talks a great victory .
bien entendu , il parle de une belle victoire .

translateTwoWords
(2, understood, 0, about)

NULL well understood , it talks about a great victory .
bien entendu , il parle de une belle victoire .

translateOneWord
(4, he)

NULL well understood , he talks about a great victory .
bien entendu , il parle de une belle victoire .

translateTwoWords
(1, quite, 2, naturally)

NULL quite naturally , he talks about a great victory .
bien entendu , il parle de une belle victoire .

FIG. 3

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ITERATION 1

ce ne est pas juste.
that is not fair.

Aprob = 1.13162e-22 LMprob = 2.98457e-14 TMprob = 3.79156e-09

ITERATION 2

Change not -> ne to is -> ne

ce ne est pas juste.
that is is not fair.

Aprob = 9.95934e-19 LMprob = 8.65626e-10 TMprob = 1.15054e-09

ITERATION 3

Increase fertility. Change is -> est to is -> est

ce ne est pas juste.
that is not fair.

Aprob = 2.65104e-16 LMprob = 5.05036e-06 TMprob = 5.24921e-11

ITERATION 4

Change that -> ce to it -> ce

ce ne est pas juste.
it is not fair.

Aprob = 3.82599e-16 LMprob = 6.63863e-06 TMprob = 5.76322e-11

FIG. 4

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<i>sent length</i>	<i>decoder type</i>	<i>time (sec/sent)</i>	<i>translation errors (semantic and/or syntactic)</i>
6	<i>stack</i>	13.72	42
6	<i>greedy</i>	1.58	46
6	<i>greedy*</i>	0.07	46
8	<i>stack</i>	45.45	59
8	<i>greedy</i>	2.75	68
8	<i>greedy*</i>	0.15	69
10	<i>stack</i>	105.15	57
10	<i>greedy</i>	3.83	63
10	<i>greedy*</i>	0.20	68
15	<i>stack</i>	>2000	74
15	<i>greedy</i>	12.06	75
15	<i>greedy*</i>	1.11	75
15	<i>greedy¹</i>	0.63	76
20	<i>greedy</i>	49.23	86
20	<i>greedy*</i>	11.34	93
20	<i>greedy¹</i>	0.94	93

FIG. 5

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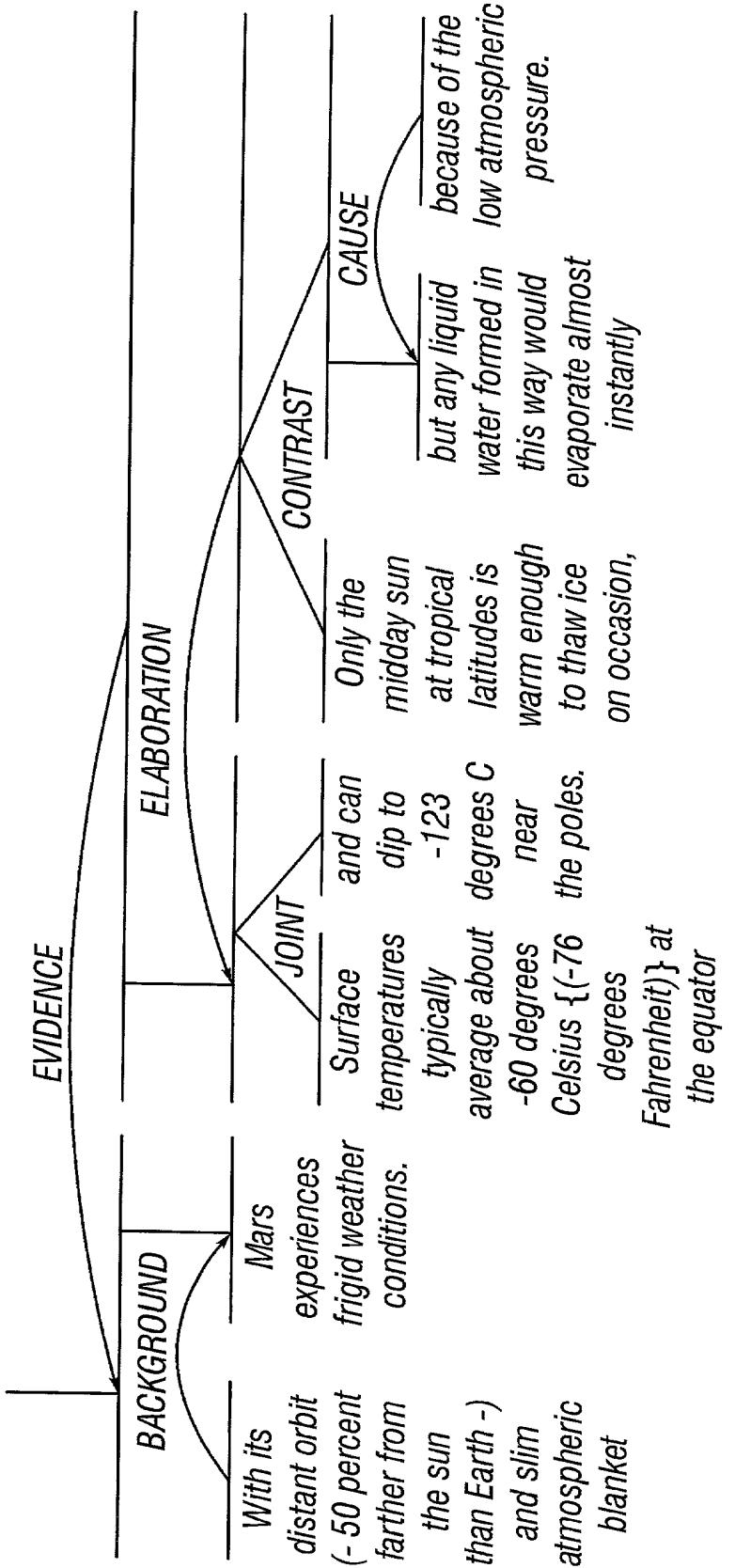


FIG. 6

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- [厚生省が昨年公表した¹]
- [人口の将来推計では、²]
- [将来、一・四九九人を最低に、³]
- [その後は上昇に転ずると⁴]
- [推計していたが、⁵]
- [早くも予想がはずれる⁶]
- [見通しとなった。⁷]

FIG. 7

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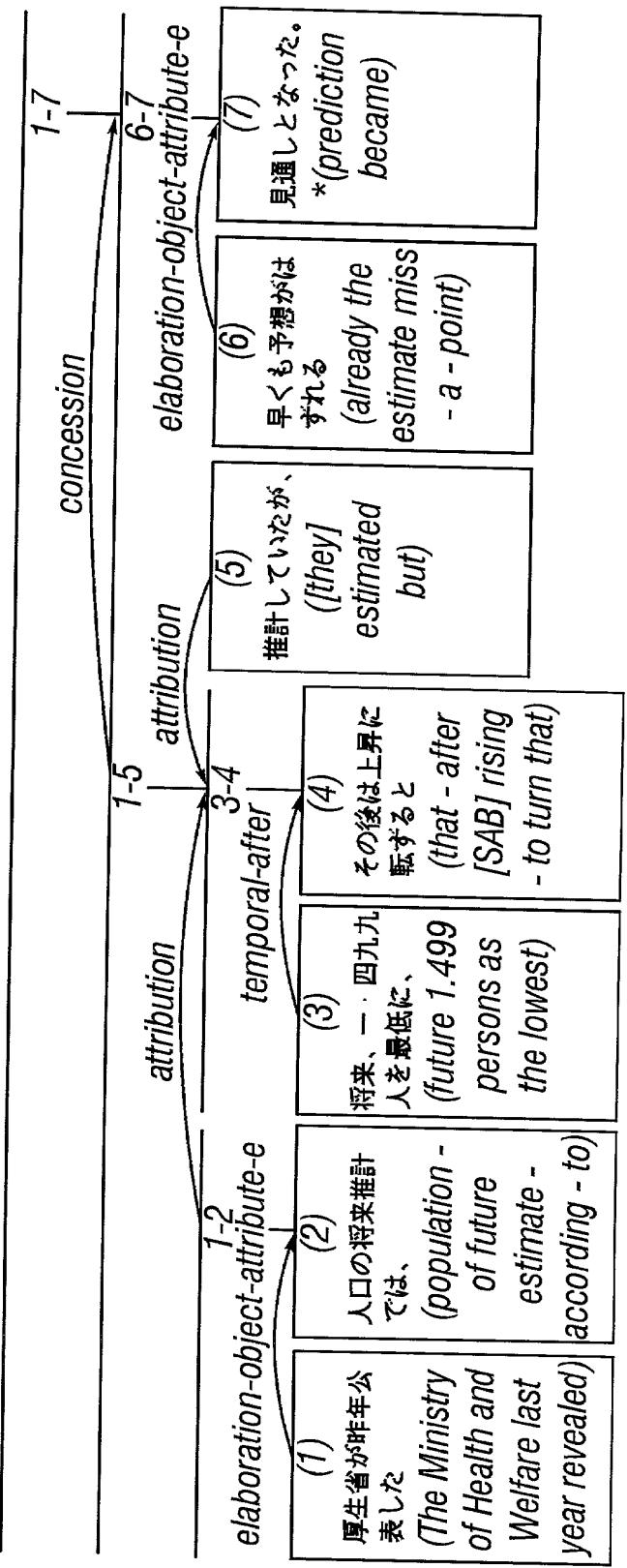


FIG. 8

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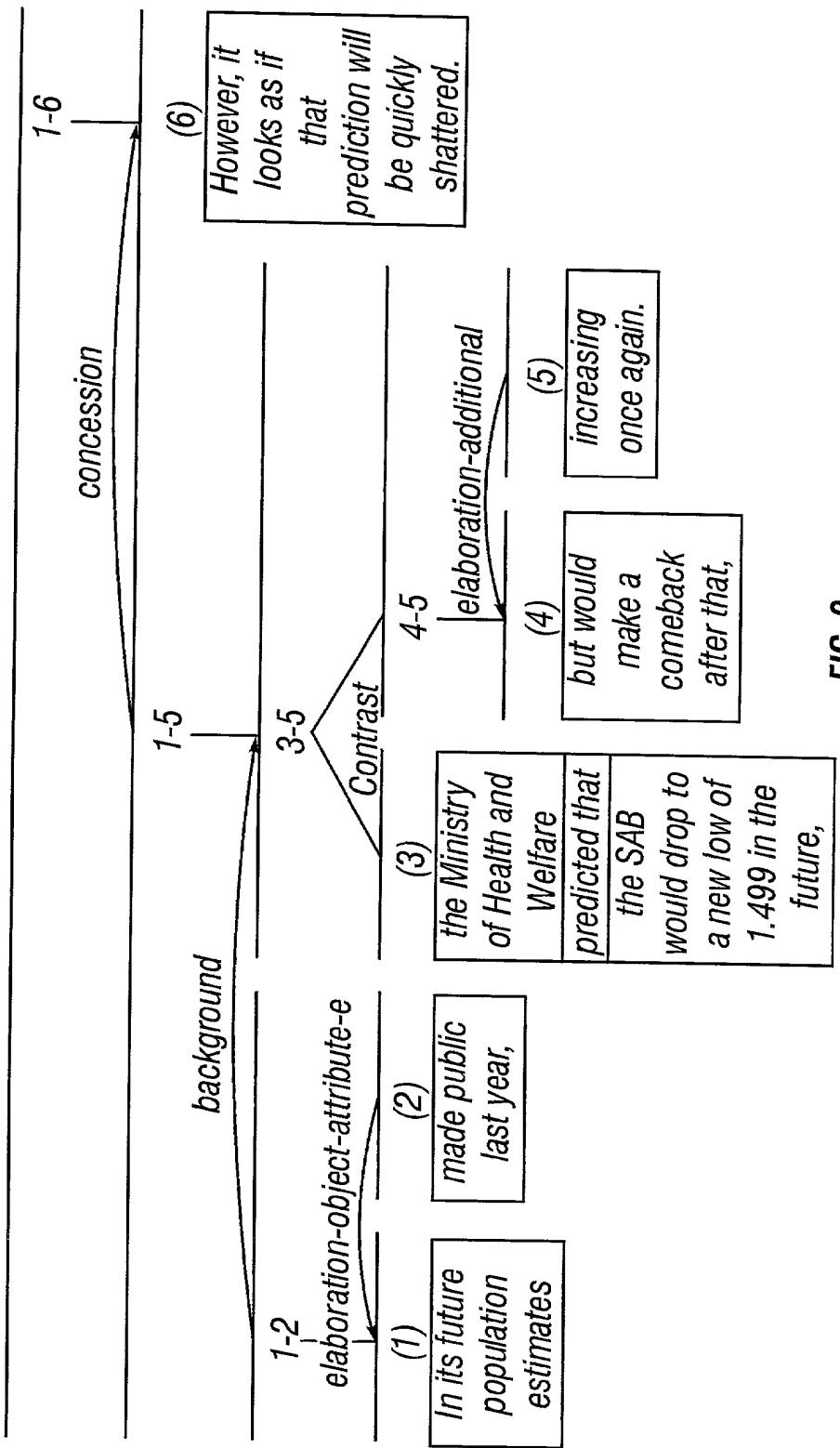


FIG. 9

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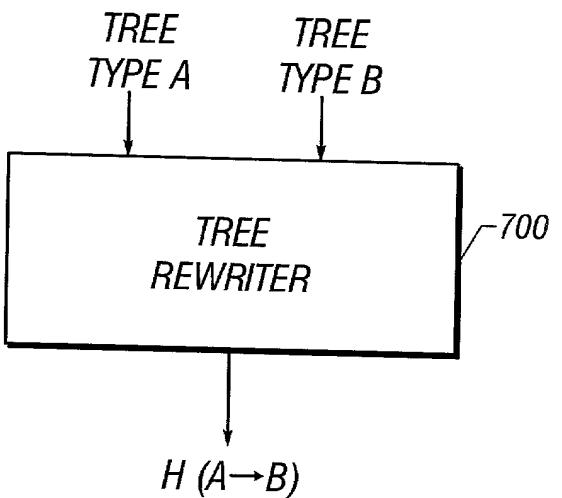


FIG. 10

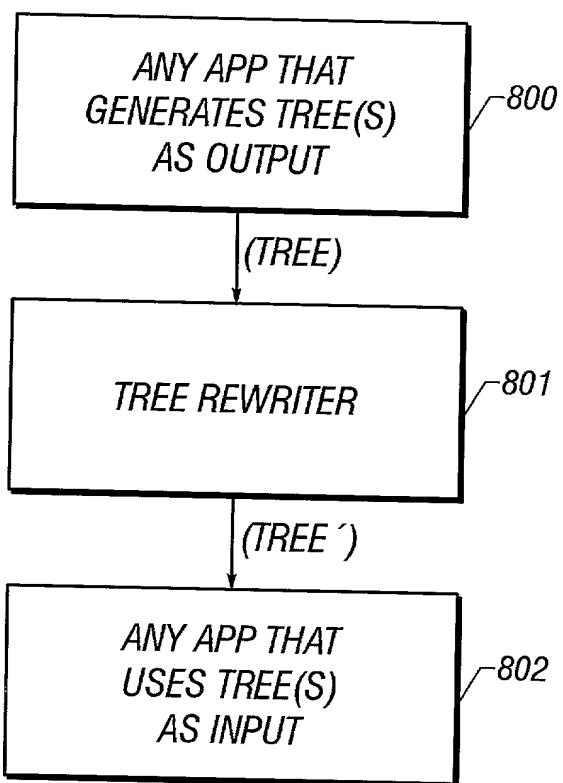
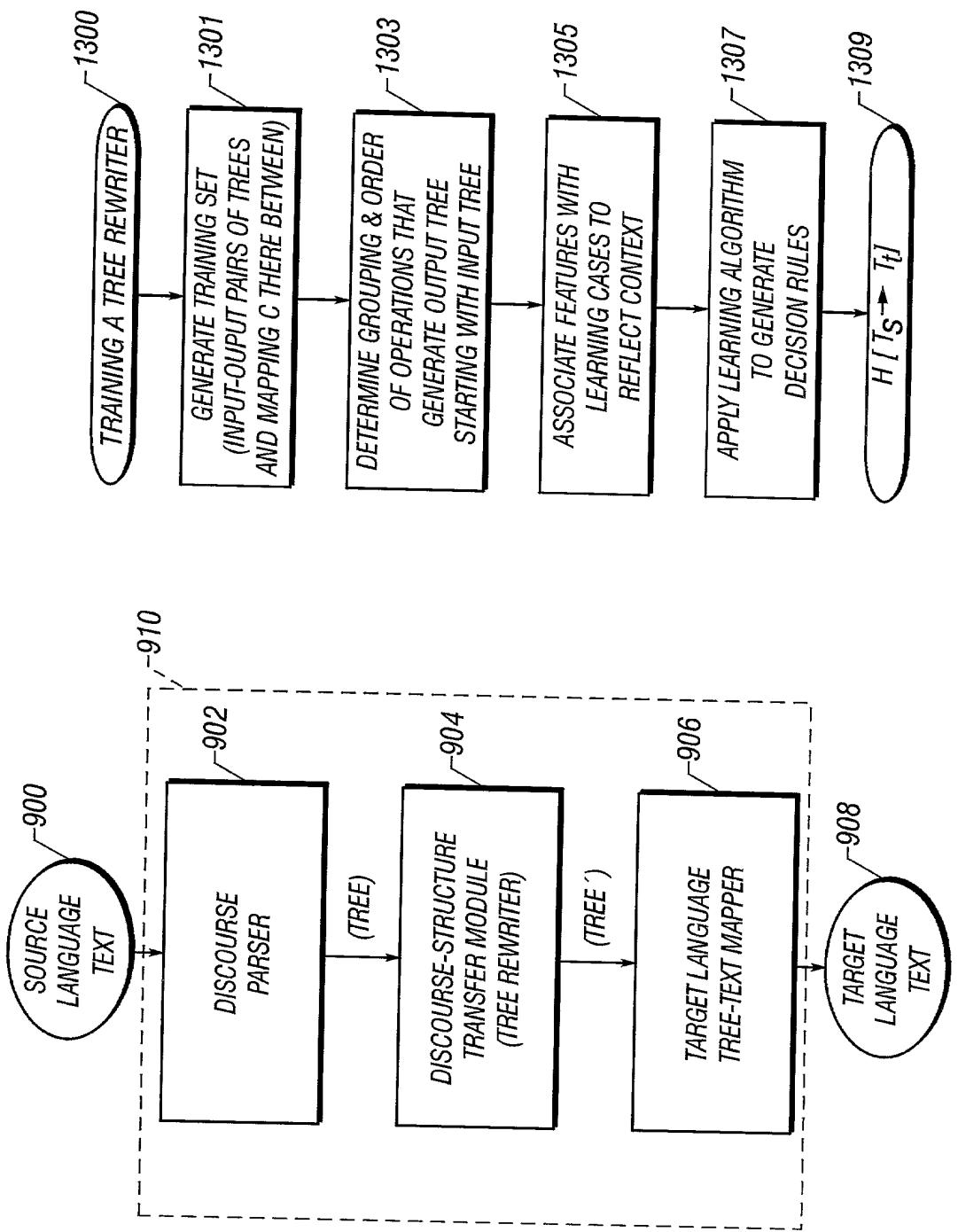


FIG. 11

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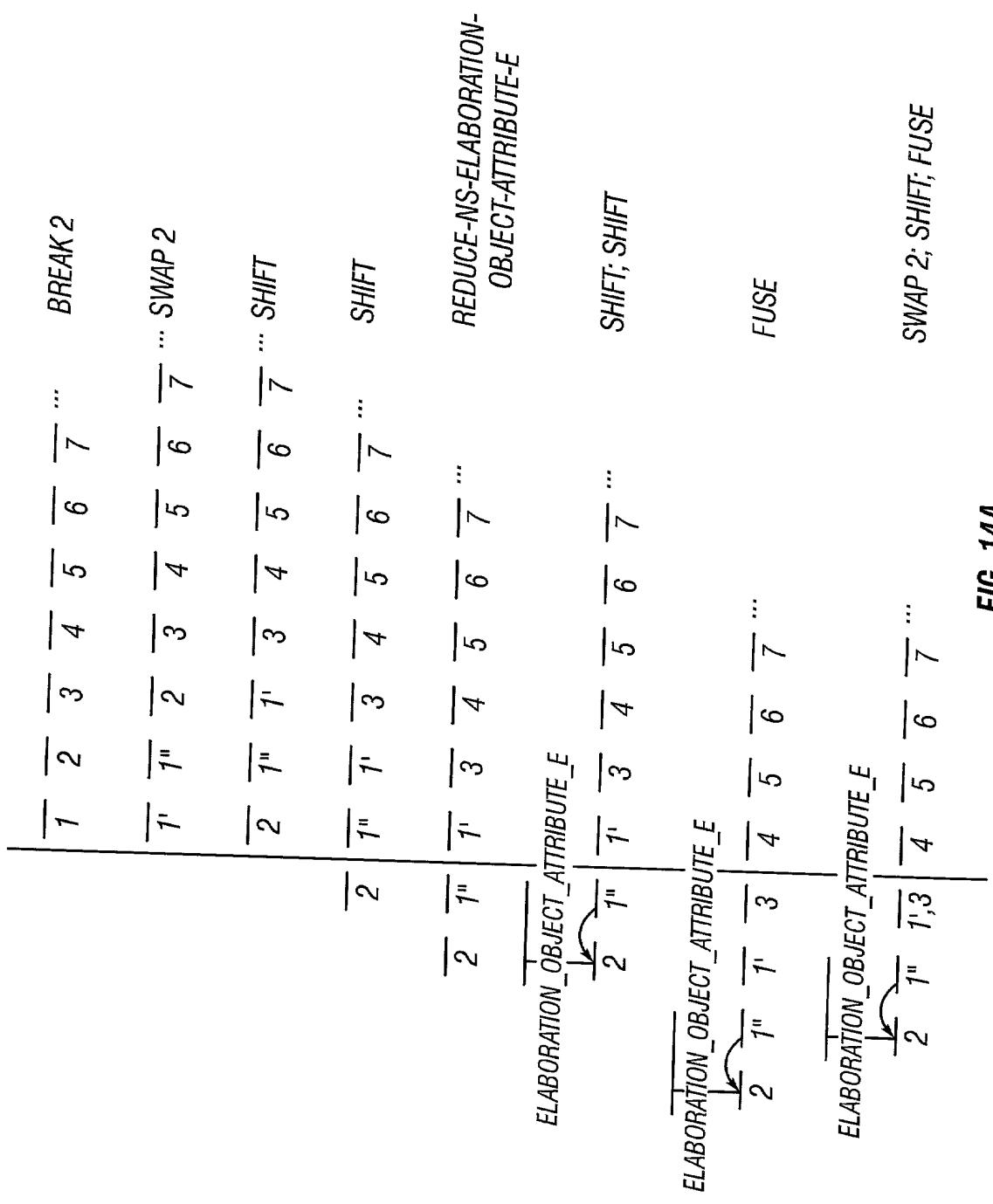
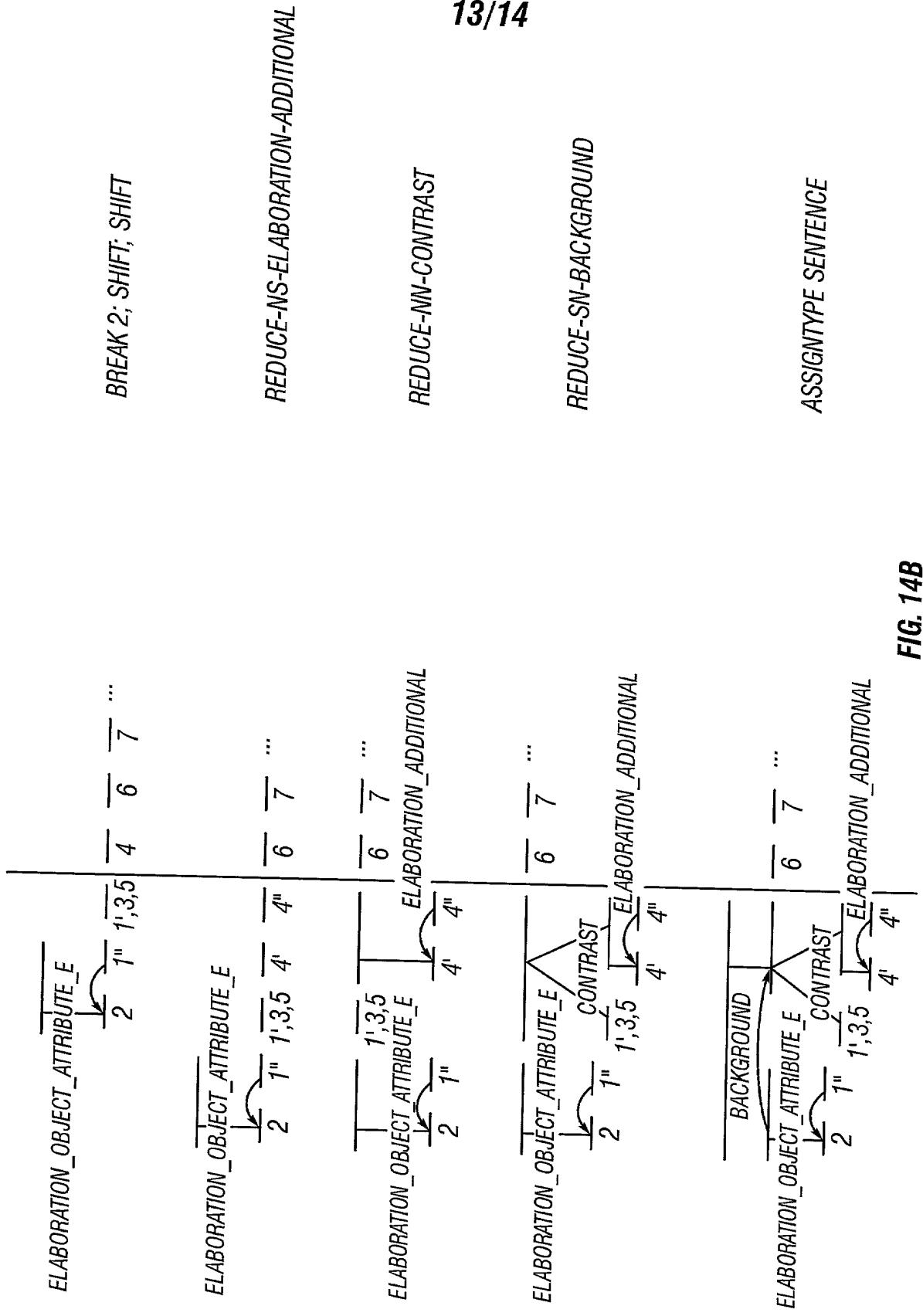


FIG. 14A



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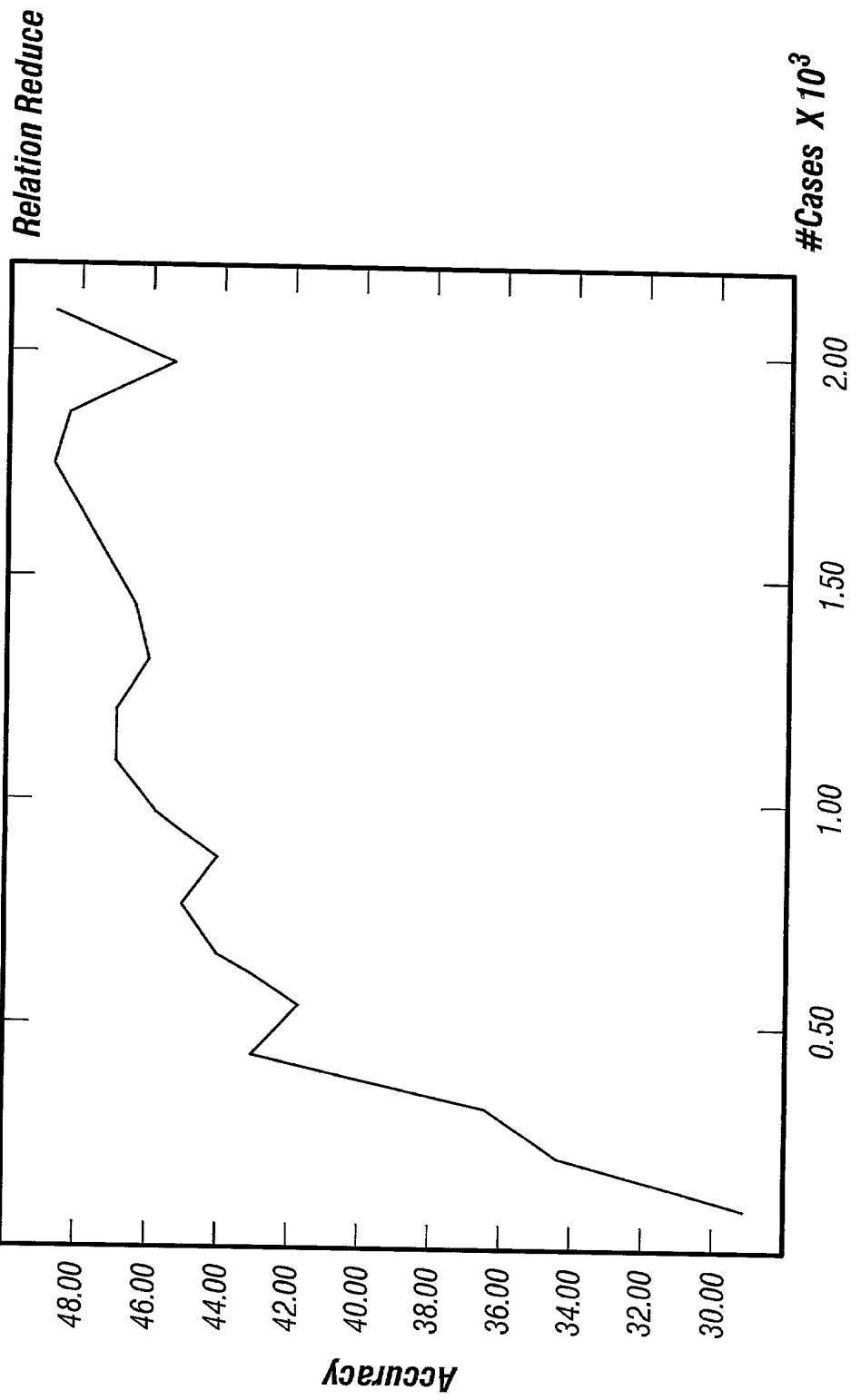


FIG. 15